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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/631,067	08/01/2000	Hajime Kimura	SEL 201	6613

7590

09/10/2003

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EXAMINER

ZEADE, BERTRAND

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/631,067

Applicant(s)

KIMURA, HAJIME

Examiner

Bertrand Zeade

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,5-7,9-11,15 and 18-27 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,8,9,12,13,20 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,3-4,8-9,12-13,20 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Beeson et al (U.S.5396350).

Beeson ('350) discloses a backlighting apparatus employing an array of micro prisms having:

Regarding claim 1, as shown in (figs. 7, 8 and 10) a light source (4); light guide plate (6/82); and a plurality of prism-shaped lenses (80/28) each being contact with a lower surface of the light guide (6/82), wherein a cross-section of each of the prism-shaped lenses (90), in a plane perpendicular to the side surfaces thereof, has a shape of equally-sided trapezoid; a plane defined by an upper base (92) of the equally-sided trapezoidal cross-section of each of the prism-shaped lenses (80/28) comes into contact with the lower surface of the light guide plate (6/28); and a obtuse angle or tilted angle (col. 17, lines 42-48) of the equally-sided trapezoidal cross-section and a critical angle for the total reflection of the prism-shaped lenses satisfy the relationship of $90 \text{ degrees} < \theta < 90 \text{ degrees} + 0$ (col. 8, lines 16-31).

Regarding claim 3, a refractive index of each of the prism-shaped lenses (80/28) is equal to that of the light guide plate (col. 5, lines 43-68).

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Regarding claim 4, each of the prism-shaped lenses (80/28) is made of the same material as the light guide plate (col. 5, lines 43-68).

Regarding claim 8, as shown in (figs. 7, 8 and 10) a light source (4); light guide plate (6/82); and a plurality of prism-shaped lenses (80/28) each being contact with a lower surface of the light guide (6/82), wherein a cross-section of each of the prism-shaped lenses (90), in a plane perpendicular to the side surfaces thereof, has a shape of equally-sided trapezoid; a plane defined by an upper base (92) of the equally-sided trapezoidal cross-section of each of the prism-shaped lenses (80/28) comes into contact with the lower surface of the light guide plate (6/28); and a obtuse angle or tilted angle (col. 17, lines 42-48) of the equally-sided trapezoidal cross-section and a critical angle for the total reflection of the prism-shaped lenses satisfy the relationship of $90 \text{ degrees} < \theta < 90 \text{ degrees} + 0$ (col. 8, lines 16-31).

Regarding claim 9, as shown in (figs. 7, 8 and 10) a light source (4); light guide plate (6/82); and a plurality of prism-shaped lenses (80/28) each being contact with a lower surface of the light guide (6/82), wherein a cross-section of each of the prism-shaped lenses (90), in a plane perpendicular to the side surfaces thereof, has a shape of equally-sided trapezoid; a plane defined by an upper base (92) of the equally-sided trapezoidal cross-section of each of the prism-shaped lenses (80/28) comes into contact with the lower surface of the light guide plate (6/28); and a obtuse angle or tilted angle (col. 17, lines 42-48) of the equally-sided trapezoidal cross-section and a critical angle for the total reflection of the prism-shaped lenses satisfy the relationship of $90 \text{ degrees} < \theta < 90 \text{ degrees} + 0$ (col. 8, lines 16-31).

Regarding claim 12, a refractive index of each of the prism-shaped lenses (80/28) is equal to that of the light guide plate (col. 5, lines 43-68).

Regarding claim 13, each of the prism-shaped lenses (80/28) is made of the same material as the light guide plate (col. 5, lines 43-68).

Allowable Subject Matter

3. Claims 2, 18-19, 5-7,9, 20,23,10,21,24,11,22,25,15,26-27 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record neither teaches nor suggest that in the axially-symmetric figure, an angle defined between a normal at a certain point on one of the opposing curved lines and a straight line connecting a crossing point between the opposing curved line and the shorter one in the pair of opposing parallel straight lines to the certain point, is in the range of +3 degrees from a critical angle for the total reflection of each of the prism-shape lenses.

Response to Arguments

1. Applicant's arguments filed 6/20/2003 have been fully considered but they are not persuasive.

2. Applicant argues that Beeson et al. ('350) do not teach the claimed limitation of the plurality of prism-shaped lenses with each in contact with a lower surface of the guide plate.

3. In response to Applicant's arguments, Beeson et al. ('350) does teach the claimed limitation of the plurality of prism-shaped lenses with each in contact with a lower surface of the guide plate. Examiner notices that there is no connecting material between Applicant's prism-shaped lenses and the lower surface of the light guide plate. Applicant further added that the claimed prism-shaped lenses are used both for introducing the light from the light source and the external light when the light source is turned off.

4. In response to Applicant's arguments, the claims rejected do not cite any limitations in relation with Applicant's claimed limitations cited above. Applicant argues in light of the specification.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bertrand Zeade whose telephone number is 703-308-6084. The examiner can normally be reached on 8:00 AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 703-305-4939. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Bertrand Zeade
Examiner
Art Unit 2875



Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800